

CLASS EXERCISES

Algebra 2
Unit #9
WS #4

For each function, determine whether y varies directly as x . If so, find the constant of variation and write the equation.

1.

x	y
2	4
4	8
16	32

2.

x	y
2	-6
4	-12
5	-15

3.

x	y
11	22
16	32
7	42

4.

x	y
27	9
30	10
60	20

For each function, determine whether y varies directly as x . If so, find the constant of variation.

5. $y = 4x - 3$ 6. $y = -5x$ 7. $y - 6x = 0$ 8. $y + 3 = -3x$

In Exercises 9–10, use k as the constant of variation and write an equation for the direct variation.

9. The amount of commission C varies directly as the amount of sales S .
10. The amount earned E varies directly as the number of hours worked h .

PRACTICE EXERCISES



Use technology where appropriate.

For each function, determine whether y varies directly as x . If so, find the constant of variation and write the equation.

1.

x	y
2	14
3	21
5	35

2.

x	y
3	9
4	12
7	21

3.

x	y
-2	4
-3	6
-5	10

4.

x	y
1	-2
3	-8
5	14

5.

x	y
9	6
12	8
15	10

6.

x	y
4	1
6	2
8	3

7.

x	y
23	24
55	56
66	67

8.

x	y
2	2.6
3	3.9
4	5.2

For each function, determine whether y varies directly as x . If so, find the constant of variation.

9. $y = 12x$ 10. $y = 6x$ 11. $y = -2x$ 12. $y = 4x + 1$
13. $y = -2x + 1$ 14. $y + 2x = 1$ 15. $y = x$ 16. $y = 3x - 5$
17. $3y = 4x$ 18. $2y - 5x = 0$ 19. $\frac{y}{x} = 6$ 20. $\frac{y}{x} - 8 = 3$

In Exercises 21–26, y varies directly as x .

21. If $y = 4$ when $x = 3$, find y when $x = 6$.
22. If $y = 7$ when $x = 2$, find y when $x = 8$.
23. If $y = 4$ when $x = -2$, find x when $y = 6$.
24. If $y = 6$ when $x = 2$, find x when $y = 12$.
25. If $y = 7$ when $x = 2$, find y when $x = 3$.
26. If $y = 5$ when $x = -3$, find y when $x = -1$.

For each function, determine whether y varies directly as x . If so, find the constant of variation.

27. $4y - 2x = 4$ 28. $y = 2\pi x$ 29. $y = x + \pi$
30. $y = 2x^2$ 31. $y - 4x^3 = 0$ 32. $\frac{3y}{5} = 4x$